

REMARKS

Applicants reply to the Office Action dated December 17, 2009 within the one month shortened statutory period for reply. Claims 1-18 were pending in the application. Applicants cancel claims 2 and 6 without prejudice to filing one or more claims having similar subject matter in other applications. Applicants assert that the application is in condition for allowance and reconsideration of the pending claims is requested.

Support for the amendments may be found in the originally-filed specification, claims, and figures. No new matter has been introduced by these amendments. For example, support for the amendments to claim 1 are found in, for example, the description at [0192]-[0197], [0042], [0174], [0185] and [0197] of US2007/0258880 A1, and claims 6, 8 and 9 as originally filed.

The Examiner provisionally rejects claims 1-17 on the grounds of a non-statutory obviousness-type double patenting over claims 12-24 of co-pending U.S. Application No. 11/914,075. Applicants file herewith a Terminal Disclaimer, as suggested by the Examiner.

The Examiner rejects claims 1-5, 8, 9 and 13 under 35 U.S.C. §102(e) as being anticipated by Papadimitrakopoulos (U.S. Patent 7,131,537). Applicants respectfully disagree with the Examiner's rejections; however, Applicants amend certain claims, without prejudice or disclaimer, to further clarify the patentable aspects and to expedite prosecution.

Specifically, Applicants submit that Papadimitrakopoulos fails to disclose a nanotube-separation method including at least "irradiating light to a sample solution containing carbon nanotubes *in the presence of metal ions*", as formerly recited in dependent claim 6, and as recited in the currently amended claim 1 (emphasis added). Moreover, since the outstanding Office Action appears to have acknowledged the embodiment of pending claim 6 as novel over Papadimitrakopoulos, the outstanding anticipation rejection should be rendered moot.

Furthermore, claims 3-5, 8, 9 and 13 variously depend from independent claim 1. As such, Applicants assert that claims 3-5, 8, 9 and 13 are differentiated from the cited reference for the same reasons as set forth above, in addition to their own novel features.

The Examiner further rejects claims 6, 7 and 14-17 under 35 U.S.C. §103(a) as unpatentable over the aforementioned Papadimitrakopoulos and in view of Sun (U.S. Patent 7,374,685). The Examiner also rejects claims 10-12 under 35 U.S.C. §103(a) as unpatentable over the aforementioned Papadimitrakopoulos and in view of Strano, et al. (U.S. Patent 7,572,426) and/or Smalley, et al. (U.S. Patent 7,074,310). Applicants respectfully disagree with

the Examiner's rejections; however, Applicants amend certain claims, without prejudice or disclaimer, to further clarify the patentable aspects and to expedite prosecution.

Applicants cancel claim 6, so the rejections related to claim 6 are moot. Claims 7, 10-12 and 14-17 variously depend from independent claim 1. As such, Applicants assert that claims 7, 10-12 and 14-17 are differentiated from the cited references for the same reasons as set forth above, in addition to their own novel features.

Moreover, Papadimitrakopoulos, as discussed earlier, fails to disclose step a) of the claimed method in independent claim 1, which involves irradiating light to a sample solution containing carbon nanotubes in the presence of metal ions. Moreover, although Papadimitrakopoulos mentions using a magnetic field to separate metallic and semiconducting carbon nanotubes (at col 4, ln 25-33 and col 7, ln 40-43), Papadimitrakopoulos does not disclose or contemplate applying a predetermined magnetic field or chromatography to the metal-deposited carbon nanotubes, to precipitate the carbon nanotubes with a desired diameter and/or chiral vector, as recited by step b) of the claimed invention.

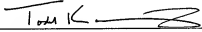
Further, it appears that Sun was cited for its purported teachings concerning the use of metal catalyst in the nanotube separation (col 4, ln 54-58); however, Sun fails to remedy the aforementioned deficiency in Papadimitrakopoulos. Specifically, Applicants submit that Sun only describes "ferric nitrate contained on an alumina catalyst bed" (col 4, ln 55-56) for growing single-walled nanotubes and is silent on a step of *"irradiating light to a sample solution containing carbon nanotubes in the presence of metal ions"*, which is recited in step a) of the claimed method. Further, Sun also fails to disclose a nanotube separation method which includes the application of a predetermined magnetic field or chromatography to the metal-deposited carbon nanotubes so as to precipitate the carbon nanotubes with the desired diameter and/or chiral vector, as recited by the step b) in the currently amended claims.

Moreover, it appears that Strano and Smalley are cited for their surfactant teachings. Applicants assert that the aforementioned Strano and Smalley do not teach or suggest the claimed invention, namely at least "irradiating light to a sample solution containing carbon nanotubes in the presence of metal ions" (emphasis added), as recited in amended claim 1. As such, the references do not remedy the above-described deficiencies in Papadimitrakopoulos and Sun.

Applicants submit that the application is now in condition for examination on the merits. Early notification of such action is earnestly solicited. Should the Examiner have any suggestions to place the application in even better condition for allowance, Applicants request that the Examiner contact the undersigned representative at the telephone number listed below. The Commissioner is authorized to charge any fees due or refund any overpayment to Deposit Account No. 19-2814, including extension of time fees, if needed.

Respectfully submitted,

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